

ABSTRACT OF THE DISCLOSURE

A device for rapidly collecting tissue samples from organisms serves as a reaction chamber. It includes a solvent used to extract the analyte, a filter, and optional bioconcentrators. The filtered suspension is irradiated with a predetermined wavelength and the emitted, scattered, or reflected photons transmitted to a detector that identifies and quantifies the analyte. The bioconcentrators may consist of antibodies and colloidal metal nanoparticles that enhance emission of Raman signal frequencies by analytes bound to the antibodies. Alternatively, the device may contain only the extraction solvent and a filter.